

## **REMARKS**

### **Overview**

These remarks are set forth in response to the Final Office Action. Presently, claims 1, 2, 4-9, 11-16 and 18-21 are pending in the Patent Application. Claims 1, 8, and 15 are independent in nature. Favorable reconsideration and allowance of the pending claims are respectfully requested.

Although Applicant disagrees with the broad grounds of rejection set forth in the Office Action, Applicant has amended claims 1, 8, and 15 in order to facilitate prosecution on the merits. Support for the above amendments can be found in the specification at least at paragraphs 0078-0081. As such, no new matter has been added.

### **Examiner Interview**

Applicants would like to thank Examiner Baig for conducting a telephone interview with Applicants' representative on February 25, 2010. During the interview, Examiner Baig and Applicants' representative discussed independent claim 1, the applied references, and the grounds of rejection. The substance of the interview is reflected by the foregoing amendments and the following remarks.

### **Allowable Claims**

Applicant thanks the Examiner for the indication of allowable subject matter in claims 4 and 5 if amended to include all of the limitations of the base claims and any intervening claims. Applicant wishes to defer amending these claims at this time.

Applicant believes the base claims are allowable as discussed below. Applicant would like to respectfully reserve the right, however, to amend the allowable claims into independent form during further prosecution if warranted.

**35 U.S.C. § 103**

**Claims 1, 2, 6, 8, 9, 11, 15, 16 and 18**

Claims 1, 2, 6, 8, 9, 11, 15, 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,293,401 to Serfaty (hereinafter “Serfaty”) in view of United States Patent No. 5,081,651 to Kubo (hereinafter “Kubo”), and further in view of United States Patent No. 5,272,727 to Okanou (hereinafter “Okanou”). Applicants respectfully traverse the rejection, and requests reconsideration and withdrawal of the rejection.

According to MPEP § 2143, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). *See* MPEP 706.02(j).

Applicant submits that the cited references, taken alone or in combination, fail to teach each and every element recited in claims 1, 2, 6, 8, 9, 11, 15, 16 and 18, and thus they define over the cited references. For example, with respect to claim 1, the cited references fail to teach at least the following language:

selecting said channel impulse response estimate from one of said candidate channel impulse response estimate vectors.

As correctly noted in the Office Action, the above-recited language is not disclosed by Serfaty and Kubo. According to the Office Action, the missing language is disclosed by Okanou at Col. 2, line 45 – Col. 3, line 12. Applicants respectfully disagree and this assertion is respectfully traversed.

Applicant respectfully submits that claim 1 defines over Okanou because Okanou fails to disclose, teach or suggest at least “selecting said channel impulse response estimate from one of said candidate channel impulse response estimate vectors.” According to the Office Action, Okanou discloses this language at Col. 2, line 45 – Col. 3, line 12. The cited portion of Okanou describes an output of a maximum likelihood sequence estimator (14) that is applied to channel estimators (20-0, ... , 20-m) to produce 0-th to m-th order estimates for coupling through a lead to an adder in which the estimates are summed to produce an output represented by a vector. *See* Okanou, Col. 2, lines 60-66. By way of contrast, amended claim 1 recites “selecting said channel impulse response estimate from one of said candidate channel impulse response estimate vectors.” This provides a significant technical advantage because the most accurate estimate may be selected from the generated set of candidate channel impulse response estimate vectors by calculating the minimum distance between the generated set of

candidate channel impulse response vectors and a second received training sequence. *See, e.g.,* Specification, paragraphs 0078-0081. Applicant submits that the cited portions of Okanou fail to disclose “selecting said channel impulse response estimate from one of said candidate channel impulse response estimate vectors.” Therefore, Okanou fails to disclose, teach or suggest the missing language. Consequently, the cited references, whether taken alone or in combination, fail to disclose, teach or suggest ever element of independent claim 1.

Absence from the cited references of the above-mentioned claim elements negates obviousness. Accordingly, Applicant respectfully requests removal of the obviousness rejection with respect to claim 1. Furthermore, Applicant respectfully requests withdrawal of the obviousness rejection with respect to claims 2 and 6, which depend from claim 1, and therefore contain additional features that further distinguish these claims from the cited references.

Independent claims 8 and 15 recite elements similar to those recited in claim 1. Therefore, Applicant respectfully submits that claims 8 and 15 are not obvious and are patentable over the cited references for reasons analogous to those presented with respect to claim 1. Accordingly, Applicant respectfully requests removal of the obviousness rejection with respect to claims 8 and 15. Furthermore, Applicant respectfully requests withdrawal of the obviousness rejection with respect to claims 9, 11, 16 and 18 that depend from claims 8 and 15, and therefore contain additional features that further distinguish these claims from the cited references.

Claims 7, 12-14 and 19

Claims 7, 12-14 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,293,401 to Serfaty (hereinafter “Serfaty”) in view of United States Patent No. 5,081,651 to Kubo (hereinafter “Kubo”), further in view of United States Patent No. 5,272,727 to Okanou (hereinafter “Okanou”), and further in view of United States Publication No. 2003/0185310 to Ketchum et al. (hereinafter “Ketchum”). Applicants respectfully traverse the rejection, and requests reconsideration and withdrawal of the rejection.

As recited above, Applicants respectfully submit that Serfaty, Kubo and Okanou fail to disclose each and every element recited in independent claims 1, 8 and 15. Moreover, Applicants respectfully submit that Ketchum fails to remedy the above identified deficiencies of Serfaty, Kubo and Okanou. Consequently, Applicants respectfully submit that claims 7, 12-14 and 19 define over Serfaty, Kubo, Okanou and Ketchum taken alone or in combination. Accordingly, Applicants respectfully request removal of the obviousness rejection with respect to claim 7, 12-14 and 19.

Claims 20 and 21

Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 5,293,401 to Serfaty (hereinafter “Serfaty”) in view of United States Patent No. 5,081,651 to Kubo (hereinafter “Kubo”), further in view of United States Patent No. 5,272,727 to Okanou (hereinafter “Okanou”) and further in view of United States Publication No. 2006/0114981 to Gosh et al. (hereinafter “Gosh”).

Applicants respectfully traverse the rejection, and requests reconsideration and withdrawal of the rejection.

As recited above, Applicants respectfully submit that Serfaty, Kubo and Okanoué fail to disclose each and every element recited in independent claims 1, 8 and 15. Moreover, Applicants respectfully submit that Gosh fails to remedy the above identified deficiencies of Serfaty, Kubo and Okanoué. Consequently, Applicants respectfully submit that claims 20 and 21 define over Serfaty, Kubo, Okanoué and Gosh taken alone or in combination. Accordingly, Applicants respectfully request removal of the obviousness rejection with respect to claim 20 and 21.

### **Conclusion**

It is believed that claims 1, 2, 4-9, 11-16 and 18-21 are in condition for allowance. Accordingly, a timely Notice of Allowance to this effect is earnestly solicited.

Applicants do not otherwise concede, however, the correctness of the Office Action's rejection with respect to any of the limitations of the independent claims and dependent claims discussed above. Accordingly, Applicants hereby reserve the right to make additional arguments as may be necessary to further distinguish the claims from the cited references, taken alone or in combination, based on additional features contained in the independent or dependent claims that were not discussed above. A detailed discussion of these differences is believed to be unnecessary at this time in view of the basic differences in the independent claims pointed out above.

The Examiner is invited to contact the undersigned to discuss any matter concerning this application.

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Reply to Office Action of January 12, 2010

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Examiner: Adnan Baig  
TC/A.U. 2461

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to the Deposit Account No. 50-4238.

Respectfully submitted,

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John F. Kacvinsky, Reg. No. 40,040  
Under 37 CFR 1.34(a)

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